

What Is Claimed Is:

1. An area assigning method in a storage management system for managing a storage device for storing data, comprising
5 the steps of:

holding management information for managing the storage device, area assignment information for managing an area assigning state of the storage device, and history information for managing a history of area assuring and release;

10 obtaining transition of a used amount of a storage by referring to the history information upon receiving an assignment request for temporarily using an area in association with designation of an area size and a using period;

determining based on the obtained transition of the
15 used amount of the storage whether or not the requested area can be assigned at the using period which is requested for assignment; and

assigning a size designated by the request, the using period, and the area when the area can be assigned as a result
20 of the determination.

2. The area assigning method according to Claim 1, further comprising the steps of:

obtaining a necessary area size and a necessary using
25 period upon executing processing for temporarily using the

storage;

requesting assignment of the area which is temporarily
used for storage management; and

executing processing by using the area assigned for
5 the storage management and requesting release of the area which
is not necessary after completing the processing.

3. The area assigning method according to Claim 1,
further comprising the steps of:

10 obtaining an execution time of reediting processing
and a size of a work area necessary for reediting when a database
management system executes the reediting processing;

requesting the assignment of the area which is
temporarily used for the storage management; and

15 executing the reediting, as a work area, the area
assigned for the storage management and requesting release of
the area which is not necessary when the reediting completes.

4. The area assigning method according to Claim 1,
20 wherein in the step of obtaining the transition, when the storage
management system receives a request for an assignment
reservation for temporarily using the area in association with
the designation of a using time, the area size, and the using
period, the transition of the used amount of the storage is
25 obtained based on an area reservation state and the history

information,

in the determining step, it is determined whether or not a designated area can be assigned at a designated period from a designated time in accordance with the transition of the used amount of the storage, and

in the area assigning step, when a request for assigning a reserved area at requested time, the designated period and the reserved area are assigned for the request source.

5. The area assigning method according to Claim 4, further comprising the steps of:

obtaining an execution date, a necessary area size, and an area-necessary period upon planning the execution of processing which temporarily uses the storage;

a step of requesting the assignment reservation of the area which is temporarily used for the storage management;

a step of requesting the assignment of the reserved area for the storage management at the execution date; and

a step of executing the processing by using the area assigned for the storage management and requesting the release of the area which is not necessary after completing the processing.

6. The area assigning method according to Claim 4, further comprising the steps of:

scheduling execution of reediting processing and obtaining a scheduled date, a size of a work area necessary for the reediting, and execution time of the reediting processing by the database management system;

5 requesting the assignment reservation of the area which is temporarily used for the storage management;

 requesting the assignment of the reserved area on the scheduled date of executing the reediting; and

 executing the reediting of the assigned area for the
10 storage management as the work area and requesting the release of the area which is not necessary upon completing the reediting.

7. The area assigning method according to Claim 4, wherein the storage management system returns reservation
15 information and area assignment information to a request source upon receiving the request for inquiring the reservation state.

8. The area assigning method according to Claim 5, further comprising the steps of:

20 requesting the assignment reservation of the area which is temporarily used for the storage management and obtaining a reservation date based on the reservation state when the area is not reserved on the requested date and then an inquiry of the reservation state is requested; and

25 setting the obtained date as the requested date and

requesting the assignment reservation of the area which is temporarily used for the storage management.

9. The area assigning method according to Claim 6,
5 further comprising the steps of:

requesting the assignment reservation of the work area necessary for editing, and when the area is not reserved on the reediting scheduled date, requesting an inquiry of the reservation state by a database management system;

10 obtaining the reservation date based on the reservation state and then changing a reediting execution scheduled date to the obtained date; and

requesting the assignment reservation of the work area necessary for reediting on the changed reediting execution
15 scheduled date.

10. A reediting processing method in a storage system using a database formed on a storage device in accordance with a request from application, the database reediting processing
20 method comprising the steps of:

holding management information which manages the storage device, area assignment information which manages an area assignment state of the storage device, and history information which manages a history of area assuring and release;

25 obtaining a size of a work area necessary for reediting

and an execution time of the reediting processing upon executing the reediting processing of a database by a database management system;

designating an area size and a using period and
5 requesting assignment for temporary use of an area to the storage management system;

when the assignment is requested, determining whether or not the requested area can be assigned by calculation from the held history information;

10 assigning an area with the designated size at the designated period when the area can be assigned as a result of the determination; and

setting, as the work area, the area assigned by the storage management system and executing the reediting of the
15 database.

11. The database reediting processing method according to Claim 10, further comprising the steps of:

requesting, to the storage management system, release
20 of an area which is unnecessary after executing the reediting processing; and

recording information on the release to the history information upon releasing the area.

25 12. An area management method in a storage management

system for managing a storage device for storing data, comprising the steps of:

holding management information for managing the storage device, area assignment information for managing an area assignment state of the storage device, and history information for managing a history on area assuring and release;

receiving an assignment request for temporarily using an area in association with designation of an area size and a using period;

determining whether or not a requested area can be assigned by referring to information calculated from the held history information; and

assigning an area with a designated size at a designated period to a request source if the area can be assigned as a result of the determination.

13. The area management method according to Claim 12, further comprising the steps of:

obtaining transition of a used amount of a storage based on the history information in the determining step; and

determining whether or not the designated area can be assigned at the designated period based on the transition of the used amount of the storage.

14. An area management method in a storage management

system for managing a storage device for storing data, the area management method comprising the steps of:

holding management information for managing the storage device, area assignment information for managing an area assignment state of the storage device, and history information for managing a history on area assuring and release;

receiving an assignment request for temporarily using an area in association with designation of an area size and a using period;

determining whether or not a requested area can be assigned by referring to information calculated from the held history information;

assigning an area with a designated size at a designated period to a request source if the area can be assigned as a result of the determination;

monitoring the using period of the assigned area after assigning a temporarily-used area in the storage management system; and

calculating an excess of an area use charge when it is over the using period as result of the monitoring.

15. The area management method according to Claim 14, wherein in order to calculate the excess, the storage management system comprises an account table for managing a user name and a using period of the storage device and a charge

table for registering at least of an excess for temporary assignment on the storage device.

16. A program having a function for executing the
5 method according to Claim 1.

17. A storage management system for managing a storage device for storing data in response to a request from application, the storage management system comprising:

10 a main memory for holding management information for managing the storage device, area assignment information for managing an area assignment state of the storage device, and history information for managing a history on area assuring and release; and

15 processing means for assigning an area of the storage device to the application in accordance with the management information and the area assignment information,

the processing means comprising:

calculating means for obtaining transition of a
20 used amount of a storage by referring to the history information upon receiving an assignment request for temporarily using an area in association with designation of an area size and a using period;

means for determining whether or not a requested
25 area can be assigned at the using period for the assignment

request based on the transition of the used amount of the storage;
and

assigning means for assigning a size and a using
period designated by the request and an area when the area can
5 be assigned as a result of the determination.

18. The storage management system according to Claim
17, wherein the main memory further holds a table of a
temporarily-assigned area list which stores a user name to which
10 the area is assigned, an area name, an assignment size, and
a using period.

19. The storage management system according to Claim
18, wherein the processing means further comprise means for
15 monitoring whether or not the assigned using period passes by
referring to the table of the temporarily-assigned area list,
and returns a result of the monitoring by the monitoring means
to a console terminal.

20. The storage management system according to Claim
19, wherein the main memory further stores an account table
for managing a user name and a using period of the storage device
and a charge table for registering at least an excess for
temporary assignment on the storage device, and

25 the processing means further comprise calculating

means for calculating an excess of an area use charge by referring to the account table and the charge table.